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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/771,600

02/04/2004

Masao Mizumaki

B422-254

3443

26272

7590

03/20/2006

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EXAMINER

LAM, THANH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/771,600

Applicant(s)

MIZUMAKI, MASAO

Examiner

Thanh Lam

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 2/17/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The request filed on 2/17/2006 for a RCE based on parent Application No. 10/771600 is acceptable and a RCE has been established. An action on the RCE follows.

### ***Response to Arguments***

1. Applicant's arguments filed 2/17/2006 have been fully considered but they are not persuasive.
2. In response to applicant's argument that "the teachings of the Sakamoto patent are combined with the teachings of the Aoshima patent, as suggested by the Examiner, so that the rotor shaft 3 of the Sakamoto patent is formed of a soft magnetic material, the distance between the shaft 3 and the coils 12-1 to 12-4 provides considerable magnetic resistance in the magnetic path between the shaft and the coils, which, in turn, prevents any portion of the shaft from acting as an inside magnetic pole portion energized by one of the coils."

The examiner submits that the cited secondary reference Aoshima read on the amended features (see interpretation in the rejection below) as recited in claim 1. Regarding the subject matters as unlined above, the distance between the coils and the shaft is not a main factor. The electromagnetic circuit is formed by conducting among the poles piece (11b of Sakamoto) via through magnets (5 of Sakamoto) and than to the soft magnetic shaft (44) that functions as a complete flux return. Therefore, the proposal in combined Sakamoto and Aoshima in this particular case is deemed to a proper rejection.

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3. the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto (US 5,780,944) in view of Aoshima (US 5,384,506).

Regarding claim 1, Sakamoto discloses a motor comprising: a magnet which has a cylindrical shape and is divided into N in the circumferential direction so as to be magnetized to different poles (5) alternately; a rotor shaft (3) is fixed in the inside diameter portion of said magnet; a first coil (12-1) which is adjacent to the rotor shaft and is arranged adjacently to said magnet in the axial direction of said rotor shaft; a first outside magnetic pole portion (11B) which is excited by said first coil, is inserted on the inner periphery side (11-1) of said first coil, and is arranged so as to be opposed to a predetermined angle range of the outer peripheral surface of said magnet with a

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predetermined gap being provided between said first outside magnetic pole portion and the outer peripheral surface of said magnet; a second coil (12-3) which is adjacent to the rotor shaft and is arranged on almost the same plane as said first coil so as to be adjacent to said magnet in the axial direction of said rotor shaft; and a second outside magnetic pole portion (11-3) which is excited by said second coil, is inserted on the inner periphery side of said second coil, and is arranged so as to be opposed to a predetermined angle range of the outer peripheral surface of said magnet with a predetermined gap being provided between said second outside magnetic pole portion and the outer peripheral surface of said magnet.

Aoshima discloses a rotor shaft (44) is formed of a soft magnetic material, said rotor shaft comprises a first inside magnetic pole portion (the upper portion of the shaft 44, inside the diameter of rotor member 41 of figures 29-30) of which is energized by the first coil (12-1 of SaKamota) and a second inside magnetic pole portion (the lower portion of the shaft 44, inside the diameter of rotor member 42 of figures 29-30) which is energized by the second coil (12-3 of SaKamota).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the shaft material of Sakamoto and forming a soft magnetic material as taught by Aoshima in order to improve flux return of the motor.

Regarding claim 2, the proposal in combination of Sakamoto and Aoshima disclose said first outside magnetic pole portion and said second outside magnetic pole portion are formed of a same member.

Regarding claim 3, the proposal in combination of Sakamoto and Aoshima disclose said first outside magnetic pole portion and said second outside magnetic pole portion are formed into a comb teeth shape extending in the axial direction of said rotor shaft and in the same direction.

Regarding claim 4, the proposal in combination of Sakamoto and Aoshima disclose the excitation of said first coil and said second coil is switched at different timing.

Regarding claim 5, the proposal in combination of Sakamoto and Aoshima disclose an angle between said first outside magnetic pole portion and said second outside magnetic pole portion with the rotation center of said rotor shaft being the reference is  $0 = (180 - 180/N)$  degree.

### ***Conclusion***

This is a RCE of applicant's earlier Application No. 10/771,600. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (571) 272-2026. The examiner can normally be reached on t-f 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh Lam  
Primary Examiner  
Art Unit 2834

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